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GROUND ACCIDENT SAFETY PERFORMANCE

CONTENTS

- | | |
|--|---|
| 3 DASAF's Corner
Combined Arms Training | 12 10 Reasons to Wear Eye Protection |
| 4 Safety Center Half-Time Report | 13 Careful With Those Tools |
| 6 Good Drivers Get Killed Too | 14 How does Your Grinder Look? |
| 8 Buckle Up America / Operation ABC Mobilization | 16 Prevention of Heat Injuries During a Deployment to Kuwait |
| 9 More News on Ford Explorers and Firestone Tires | 18 2QFY02 TACOM Safety Messages |
| 10 Investigators' Forum
Lack of Supervision and Failure to Pay Attention Lead to Accidents | 19 Accident Briefs |
| | 20 Seatbelts Save Lives! |

features



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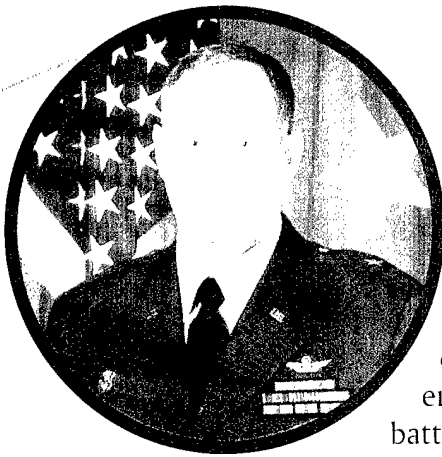
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DASAF'S CORNER

From the Director of Army Safety

Combined Arms Training

We must always prepare for the next fight—not the *last* fight. The Army wins wars by conducting successful campaigns. These campaigns are made up of successful battles and engagements, which have always been the key to battlefield successes. Engagements are where the combined arms of the Army come together.

Our training must focus on employing all of the combined arms assets in a live-fire environment. Infantry and Armor captains must understand how to safely employ their own direct-fire weapon systems, their own crew-served weapon systems, their organic and indirect fire systems, as well as understand how to safely employ supporting artillery, attack helicopter, and close air support assets.

Likewise, our aviation captains must understand how the Infantry and Armor formations at battalion and brigade fight, as well as integrating their fires into the close fight at the company and platoon level. Our aviators must understand what they are seeing, from both the friendly and enemy sides, as they maneuver about the battlefield.

We have already had too many fratricide incidents in the current war. While these have not involved the AH-64, the potential exists for us to have fratricide in the close fight as we did in Desert Shield/Desert Storm. Structured field training is the best way to mitigate the risks. Senior leaders, battalion and above, must be in the field observing and controlling the actions of their units and, most importantly, providing resources to include time to retrain to standard.

For too long, many of our attack units have focused on the deep fight. Except for selected units, we have lost the skills necessary to integrate the critical fires of the AH-64 into the close fight. As we have already seen in Afghanistan, we are going to be employed in a close fight role. We must get busy training for that mission if we are going to be successful at killing the enemy and avoid inflicting casualties on our friendly forces.

Communications, coupled with tactics, techniques, and procedures (TTP) are critical in the employment of all combined assets. You would not play a football game on Saturday without practicing all week on the plays you plan to use. We should not enter into the fight without having worked out our critical procedures on the training field. ★

Train Hard—Be Safe!

BG James E. Simmons

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SAFETY

HANDS REPORT

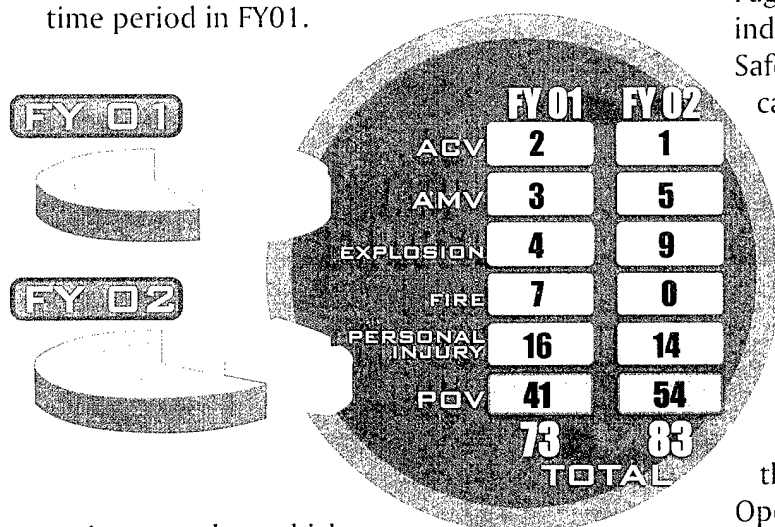
The events of September 11th have propelled our nation into war. The Army has answered the call in Operation Enduring Freedom by deploying forces in combat missions around the world. On the home front, National Guard and Reserve Component forces have deployed to protect our borders and key nodes of infrastructure.

OPTEMPO

Historically, when we are at war, the OPTEMPO increases and there is an increase in accidents, or what is called a spike. While we have seen a slight increase in accidents, we have not noticed a spike as in previous combat operations.

Stats

During the first half of FY02, the Army lost 83 soldiers in ground fatal accidents. This is an increase of 13.7% in comparison to the 73 fatalities during this same time period in FY01.

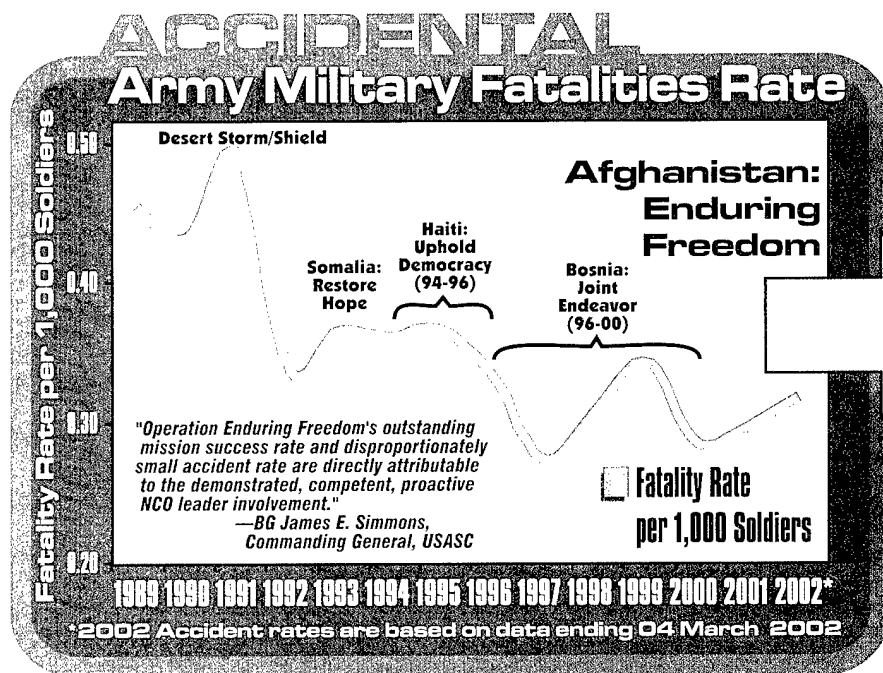


Army combat vehicle (ACV), Army motor vehicle (AMV), and personnel injury fatal accidents in FY02 are nearly the same as in FY01. There has been an increase in fatalities due to explosions this year (9), compared to four in FY01. Conversely, there have been no fatalities due to fire this year compared to seven last year.

POV accidents remain the number one killer of soldiers. The Army lost 54 soldiers in fatal POV accidents this year versus 41 in the first half of FY01. With the summer months approaching, we need to pay particular attention to POV safety.

Prevention

The Army has taken steps to assist the field in reducing these fatalities. There are new tools



for the POV toolbox on the Safety Center Home Page, as well as other material for units and individuals to improve safe driving. Further, the Safety Center has developed a series of videos called "Drive to Arrive" sponsored by various country music artists to raise POV safety awareness. These videos will be shown in AAFES theatres worldwide prior to the movie presentation.

Proactive

The Safety Center has deployed a team forward in Southwest Asia. Their mission is to provide proactive safety assistance to the Theater Army Commander in support of Operation Enduring Freedom. In conjunction with the ARCENT staff, this team is assisting the command in accident prevention and risk management integration.

Bottom line

Leaders set the conditions for their soldiers to succeed—whether that is accomplishing their tactical mission or driving home safely in their POV. Incorporating the five steps of the risk management process into all operations will assist in not only accomplishing the mission, but getting it done safely.

POC: MAJ Dave Hudak, Operations Research and Systems Analysis Division, DSN 558-2075 (334-255-2075), dave.hudak@safetycenter.army.mil

On a warm September afternoon, Sergeant Jones, 26, departed post and drove home on a two-lane road. Two other soldiers were in the vehicle with him hitching a ride. SGT Jones was looking forward to dinner with his wife and twin sons.

As SGT Jones headed north, a southbound vehicle veered onto his side of the road. At the wheel was a 16-year-old girl driving on her learner's permit. She was trying to pass a sport utility vehicle, but had failed to see Jones' car. The vehicles slammed into each other head-on. Jones' vehicle turned upside down and exploded in flames. Sergeant Jones and one of his passengers were killed; the other was severely burned. The teenager and her mother, who was also in the car, were badly injured.

A simple error on a clear day, by a novice driver on a straight stretch of road, cost two men their lives and left two young boys fatherless. Every day, good drivers, obeying speed limits and the rules of the road, are nonetheless injured or killed by careless, drunk, inexperienced, or reckless drivers.

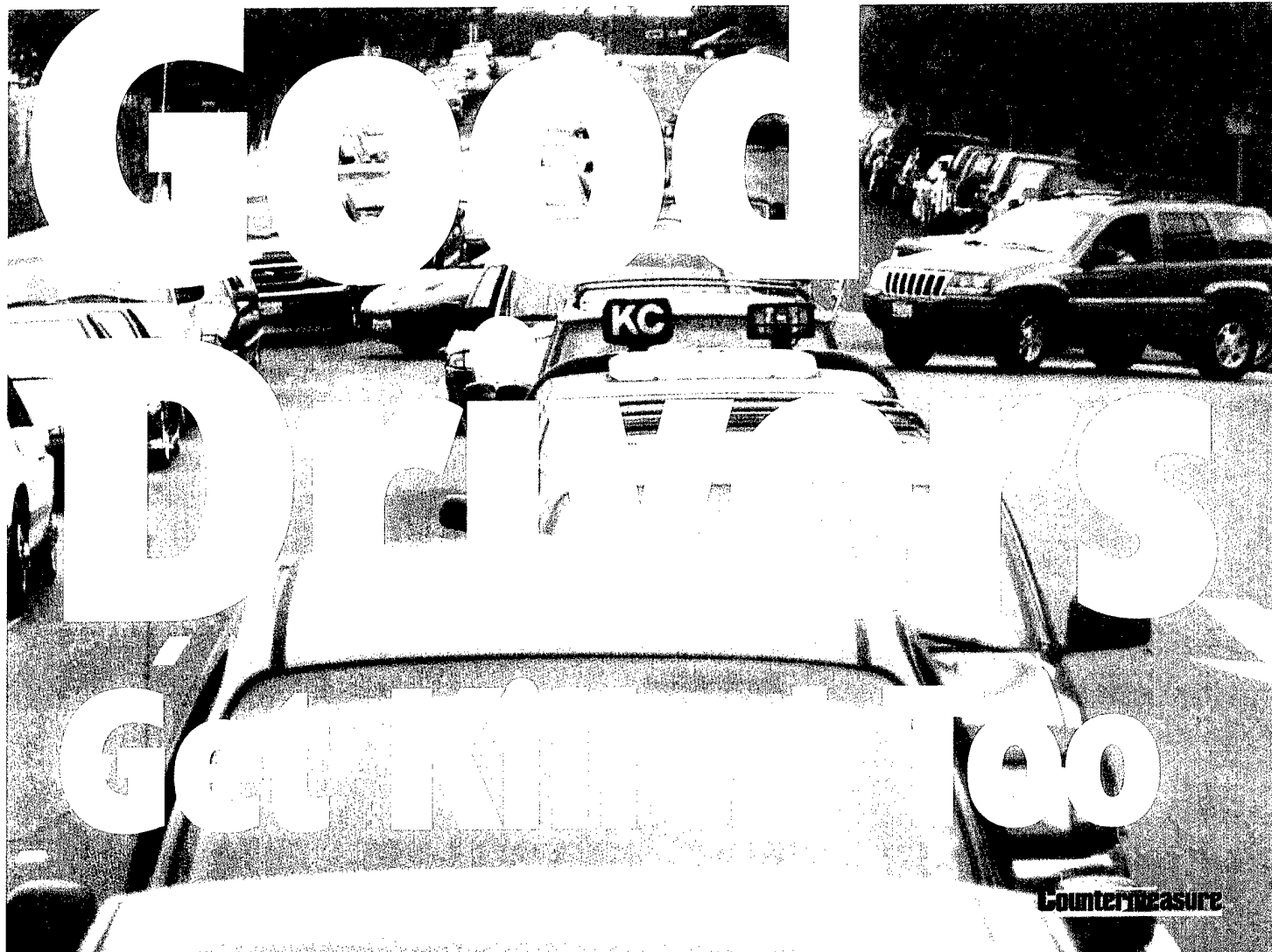
So, how do these roadway accidents happen? And is there anything you can do to avoid them?

Statisticians at the National Safety Council (NSC) analyzed the nation's 41,611 traffic deaths in 1999 (the latest available data). They were asked to determine common ways that "good" drivers—any of those found not at fault in an accident—were killed. Here are the sobering facts.

Head-on impact

The kind of accident that killed Sergeant Jones and his co-worker is a top killer of innocent drivers. Head-ons killed 42 percent of the good drivers in the NSC's survey. For those behind the wheel, death by an oncoming auto can be particularly devastating because of the laws of physics: the speed of both cars multiplies the magnitude of the collision.

Surprisingly, the NSC study shows that only 6% of head-on collisions are caused by drivers passing at inopportune times. Twenty percent occurred on curves where often a driver going too fast veered into the opposite lane. But the great majority, 63%, happened when drivers were



steering straight. The crashes were likely caused by drivers who were distracted by other things (kids, changing a CD, talking on a cell phone), or who fell asleep and drifted into oncoming traffic.

We found that more than half of these head-ons occurred in daylight and more than 80% of them in dry weather. That just goes to show that more fatal accidents of every type seem to occur in nice weather when drivers may relax their guard; rather than in bad weather, when the majority of drivers tend to be more cautious and attentive.

Is there anything you can do to reduce the risk of meeting another car head-on? There is one measure that eliminates much of the risk. Forget the scenic route and head for the highway. Use major highways where traffic flow is separated by medians, and access is controlled by on and off-ramps.

Deadly sign

Perhaps the most familiar of all traffic signs—the red octagonal stop sign—turns out to be a significant risk to good drivers.

Sixteen percent of drivers in the NSC analysis were killed because another driver either did not see, purposely ignored, or showed poor judgment at a stop sign. For example, drivers often stop or slow down at a sign and then pull out without bothering to check the intersection for an oncoming car. Or, they misjudge an approaching car's distance and speed and pull in front of it.

When approaching intersections, even when you have the right-of-way and see a car about to cross or enter the road you're on, don't just look at the car to see if it comes to a full stop. Check the driver too. Is he looking your way? Does he appear distracted? It could be your best warning of an accident waiting to happen.

Red-light running

Red-light running is another deadly accident for innocent drivers, killing 8% of them. Red-light running is on the rise nationwide. To avoid them, the best advice remains the lesson motorists learned from their high school driver-education teachers: Even when your light has changed to green, take one more look both ways before proceeding. Too many drivers consider the yellow light a 'last chance' to get through an intersection,

rather than a caution signal. Drivers must get into the habit to **Brake on Yellow, Stop on Red.**

The most important conclusion to draw from the statistics compiled by the National Safety Council is this: stick to major highways whenever you can. An overwhelming 86% of traffic fatalities happen on side roads and byways. Only 14% occur on major highways, according to statistics from the National Highway Traffic Safety Administration (NHTSA).

And most obvious of all: wear your seatbelt all the time, every time. Period! The NHTSA says seatbelts reduce the risk of fatal injury by 45% in a car and 60% in a light truck.

Even with every safety precaution taken, soldiers must remember that the driver's seat is an inherently unsafe place to be. Learn to use your eyes to look far down the road. Learn to spot problems before they happen. Always remember that good drivers—in the safest vehicles, on the best-designed highways, on perfectly clear, dry, sunny days—can still have accidents.

(Statistics are from the National Safety Council)



POV FY02 (through 30 April 02) UPDATE	
Class A-C accidents/soldiers killed	
□ Cars	94/36
□ Vans	2/0
□ Trucks	23/11
□ Motorcycles	17/6
□ Other*	8/1

*Includes tractor trailers, unknown POVs, and bicycles

**Total POV
Fatalities**

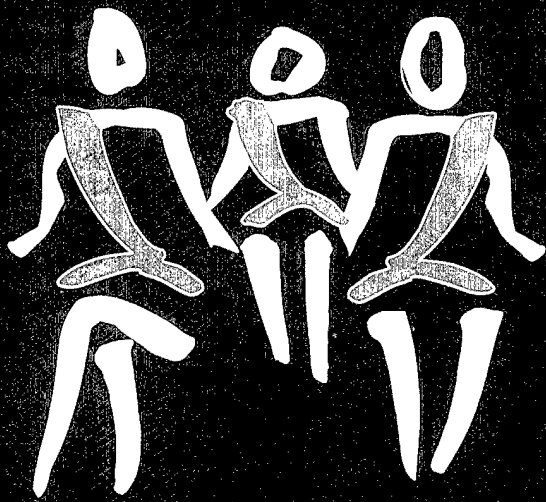
54

FY01

41

3 Yr
Avg

53



BUCKLE UP AMERICA

OPERATION ABC MOBILIZATION

Each May, "Buckle Up America Week" marks a high point in our push for greater seatbelt and child safety seat use. This year, in conjunction with the week's "Operation ABC Mobilization," we will focus on one of the most at-risk populations:

Teenagers. Due in part to low seatbelt use, fatality rates for teen drivers are four times higher than for older drivers. Let's use the start of the prom, graduation, and summer seasons—a time when teenagers are more likely to be driving and at greater risk of death or injury due to traffic crashes—as an opportunity to spread the "Buckle Up" message.

To raise the bar even higher, this year we will see an unprecedented level of law enforcement activity throughout the Nation. First, under "Operation ABC Mobilization," thousands of law enforcement agencies across the country will mobilize to actively enforce State seatbelt and child passenger safety laws. They will be on special alert for teen drivers and passengers.

In addition to the "Operation ABC Mobilization," several States will launch a high-visibility seatbelt enforcement campaign called "Click It or Ticket," which will be supported by radio and television advertisements to let the public know about enforcement efforts. A successful *Click It or Ticket* campaign in several Southeastern states resulted in an overall 9% increase in seatbelt use. I believe we will continue to see States implement these kinds of programs because we know they result in dramatic and immediate increases in seatbelt use.

Your efforts are no less important. You can help sustain these improvements in seatbelt use and reach people with information and messages about the benefits of seatbelts.

Visit our web site, www.nhtsa.dot.gov or www.buckleupamerica.org to learn more about the tools to use and pass along to leaders in your community.

Let's make this "Buckle Up America Week," May 20-27, 2002, our most successful ever and ensure that more people, especially teens, buckle up every trip, every time.

Courtesy of Jeffrey W. Runge, M.D.
Adapted from the National Highway Traffic Safety
Administration Web Site

ord Explorers and Firestone tires are old news, right? For months on end, the media inundated the public with information concerning Ford Explorers and faulty Firestone tires. The media provided us with recall information, litigation, and horror stories of the victims.

You would think that would have been enough for us to take corrective action, right? Well, several months ago we received another horror story; one that could have easily been prevented.

According to the report, a young soldier bought a 1993 Ford Explorer in January 2001 with the infamous recall tires still mounted on the vehicle. Months later, the soldier and a couple of his buddies were traveling at about 65 miles per hour on the highway when the right rear tire exploded causing the driver to lose control of the vehicle. The vehicle ran off the right side of the roadway, skidded back across to the left side of the roadway, and then flipped over, coming to rest upright in the opposite lane of traffic. During the rollover sequence, the only passenger not wearing a seatbelt was ejected from the vehicle and was fatally injured.

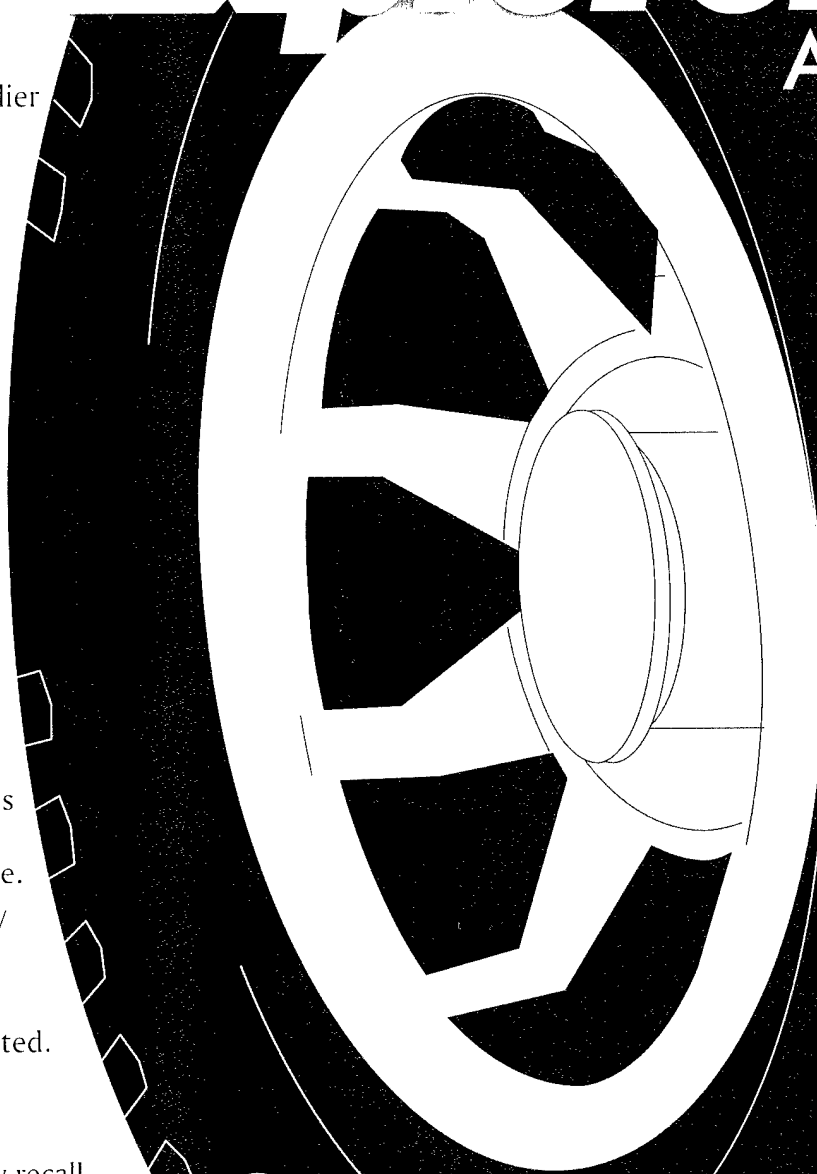
Lessons learned

Be aware that while these precautions are good general guidelines to tire safety, they may not prevent a tire failure.

- Always wear your seatbelt. Drivers/owners should ensure all passengers buckle up!
- Be sure your tires are properly inflated.
- Make sure your vehicle is not overloaded.
- Be proactive. When a critical safety recall is issued, leaders should conduct vehicle inspections and ensure there are no problems.
- Educate your soldiers on recall or defective equipment.

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More News On FORD Explorers And



Firestone TIRES

A range detail consisting of 10 soldiers were traveling along a dirt/gravel road in an M1083A1 Family of Medium Tactical Vehicles (FMTV), when the driver lost control of the vehicle, resulting in a rollover. During the accident, one soldier was fatally injured, one soldier sustained internal injuries, and six soldiers sustained minor injuries. Damage to the vehicle was extensive.

What happened?

The purpose of the range detail was to reconstruct a range in order for the battalion to conduct a platoon-level live fire exercise. The battalion issued the Operations Order (OPORD) and the range detail deployed, a few days prior to the live fire exercise, in order to complete the reconstruction of the range. They worked on the range for a few days, during which they became familiar with the route to and from the range complex.

Prior to departing the range on the day of the accident, three of the soldiers rode in the cab and seven soldiers rode in the cargo bed equipped with cargo seats. They donned their Kevlar helmets and hooked the cargo strap. The occupants in the cab of the vehicle used their seatbelts. The truck commander told the driver the route to take back to the cantonment area, which was a route familiar to the driver, as he had traveled on this road many times in the preceding days.

The driver departed the range with the nine other soldiers and traveled approximately 4 kilometers when the accident occurred. Specifically, the driver failed to make a left turn at a "Y" intersection, traveled over a dirt berm between the two roads, and back onto the shoulder of the road. The driver then over-steered the vehicle in an attempt to bring the vehicle back on the road. As a result, the

vehicle rolled one time and landed back in the upright position.




Lack of Supervision and Failure to Pay Attention Lead to Accidents

During the rollover, the brake pedal bent over the driver's foot, pinning it to the accelerator. The steering wheel and cab of the vehicle pinned the driver in such a way that he was unable to control the vehicle after it rolled over. The vehicle continued to travel another 700 meters and finally came to rest when the vehicle commander was able to engage the emergency brake and activate the engine shut-off switch. Unfortunately, all 10 soldiers had their Kevlar helmets come off their heads during the accident.

What to do about it?

Vehicle drivers and truck commanders, listen up! There are multiple lessons learned from this accident. First, when you are the driver of a vehicle, you are the individual at the controls. Safe vehicle operation while driving should be your foremost concern. Pay attention when you are the vehicle operator, because safe transport of the soldiers and equipment in your vehicle is your primary responsibility.

Second, truck commanders must ensure that the driver pays attention and maintains the posted speed limit. Your primary responsibility is **also** the safe transport of the soldiers in the vehicle.

Many accidents occur as a result of overconfidence and complacency. It is never, *never* routine when you have the responsibility for the safety of soldiers. As the truck commander or driver in a single-vehicle movement, or as part of a convoy, you must continuously enforce and apply safe vehicle operations. Also, add a pre-movement check to ensure proper wear of the Kevlar helmet (helmet on and chinstrap fastened) for all soldiers in your vehicle. Take responsibility and enforce the standards...you *will* gain respect in return. 

POC: Ground Systems and Accident Investigation Division, DSN 558-3562 (334-255-3562)



● **M1083A1 FMTV AFTER A ROLLOVER RESULTING FROM SPEED AND FAILURE TO PAY ATTENTION.**

10 Reasons to Wear Eye Protection

An employee was trimming branches from a tree when the wind blew the branch into his right eye. The employee lost his eye.

An employee working in a mattress manufacturing facility was repairing the dust cover of a box spring using an air-powered staple gun. He noted that a staple had one leg up, and he tried to hammer it down using the inverted staple gun. Consequently, his finger was on the trigger, and upon impact, the gun fired a staple into his eye.

An employee was using a high-speed air sander as a portable grinder with an abrasive grinding wheel attached. The wheel shattered, sending fragments of the wheel into his eye. As a result of the employee not wearing eye protection under his face shield, he lost his right eye.

An employee was working at a car repair shop, removing an outer axle joint from an axle shaft. He was hitting the joint with a 4-pound blue-point steel hammer, when a piece of steel punctured his eye.


An employee working in a wood furniture assembly facility was using an air gun and a pin nailer. The nail shot up and injured the employee's eye.

An employee was preparing to clean ink from the press rollers on a printing press. He was required to pour a solvent-based cleaning agent from a 1-gallon container to a 1-quart container. The cleaning agent splashed into his eye, causing a burn to the cornea.

An employee working at a soda bottling plant was handling a filled soda bottle when the bottle exploded. Flying glass cut the employee's left eye.

An employee was transferring propionic acid from a 55-gallon drum to a 5-gallon can. He was kneeling next to the drum when the transfer hose broke, resulting in the acid spraying over his face, neck, and chest causing minor burns. Fortunately, the employee was wearing eye protection and didn't lose an eye.

A machine operator was working on a cutting tool holder. He was trying to get the part out to change it, and when the machine hung up, the employee hit the steel tool holder with a steel hammer. A steel chip from the holder flew up and lodged in his eye lens.

An employee was attempting to remove a bearing from an edger housing. He was using a punch and hammer, when a piece broke off and flew into his eye. Surgery was required to repair the damage. 

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CAREFUL WITH THOSE TOOLS

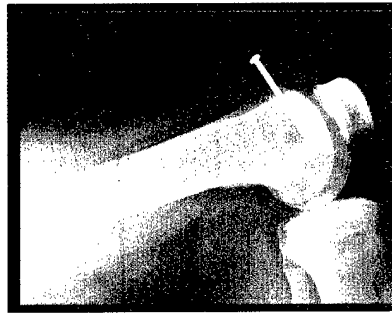
Most of us use power tools from time to time, whether at home or on the job. Power tools allow us to get more work done in a shorter amount of time. Of course, they also allow us to do more damage to ourselves in a shorter amount of time. Just like any other piece of equipment, power tools need to be inspected, maintained, and operated properly. Here are a few things that have occurred recently.

Pneumatic and explosive actuated hammers

Pneumatic and explosive actuated hammers are easier, more accurate, and less labor-intensive than the old manually operated vertical impact device, otherwise known as a hammer. Care must be taken when using these devices, as evidenced by the following case:

The soldier was working off-duty using various power tools. While attempting to move a pneumatic hammer, the tool accidentally discharged—firing a 3½-inch framing nail into his femur and knee.

These devices are often called nail guns because they shoot nails into whatever the gun is aimed at. Remember the whole “positive habit transfer” thing? If you treat your nail gun exactly as you would treat an M16 at the range, it will help keep you out of danger. Do you remember the last time you had to pry a nail out of a 2x4? How hard was it to remove? What did it sound like? Now imagine the “Doc” pulling the nail out of this soldier’s knee.



Keep kids away from the workplace

Keep the kids away from the jobsite. We had a recent accident in which a soldier’s son got his hand caught in a shredder and lost four fingers. Kids are great people. I have one at the house and another one inbound. Kids are naturally curious; however, their knowledge and coordination have not yet caught up with their sense of adventure. My five-year old son only has two modes: underfoot or somewhere else. He just wants to see what Daddy is doing and to “help out.” Resist the temptation, wait until they are old enough to learn the proper way to use the tools and strong enough to use them safely.

Lawn mowers

Safety guards are there to protect our various appendages. Many times, an operator disables or circumvents the power disconnect levers found on lawn mowers. You are not going to win that battle, my friend. If that mower is still running, you are going to lose a part of your anatomy. We just had two soldiers lose a finger in April. If your company lawnmower has the power disconnect bar removed or bound-up with 100mph tape, it’s wrong. Fix it! The appendage you save may be your own.

When you have your soldiers performing work with power tools, never assume that they know what they’re doing. Train them, test them, and supervise them. If you are using these tools off duty, apply the same rules to yourself as you would to your soldiers.

Most installations require you to receive training and certification prior to using any power tools. Make sure you check your local regulations. In any case, apply common sense and keep it safe. —

POC: MSG Sean M. O’Brian, Risk Management Integration Division, DSN 558-2845 (334-255-2845), sean.obrian@safetycenter.army.mil

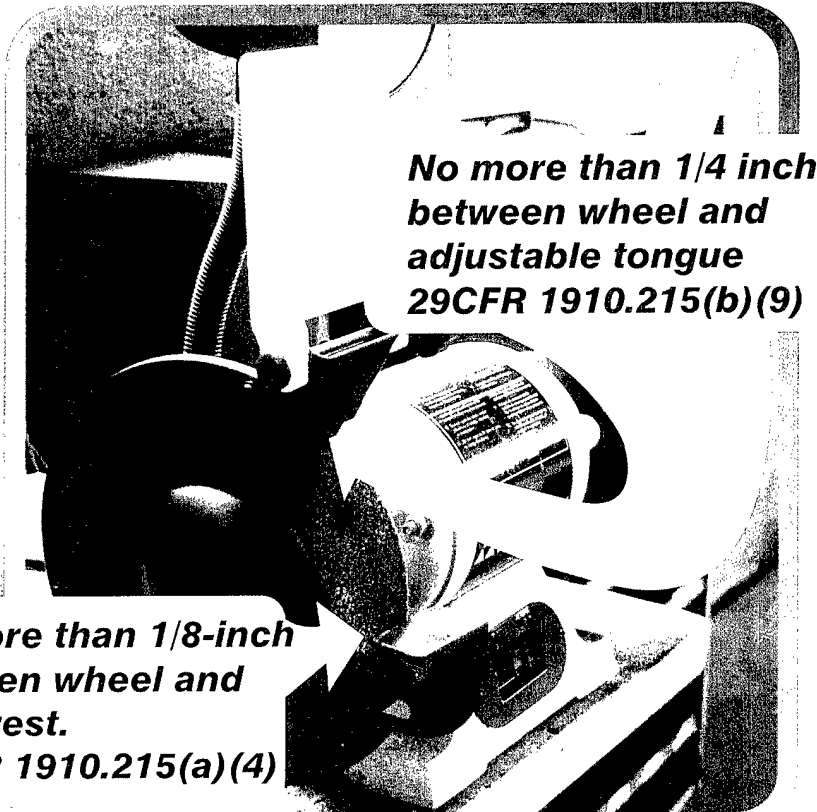


How Does Your

Is it to standard? The applicable standards can be found in the Code of Federal Regulations, 29CFR 1910, General Industry.

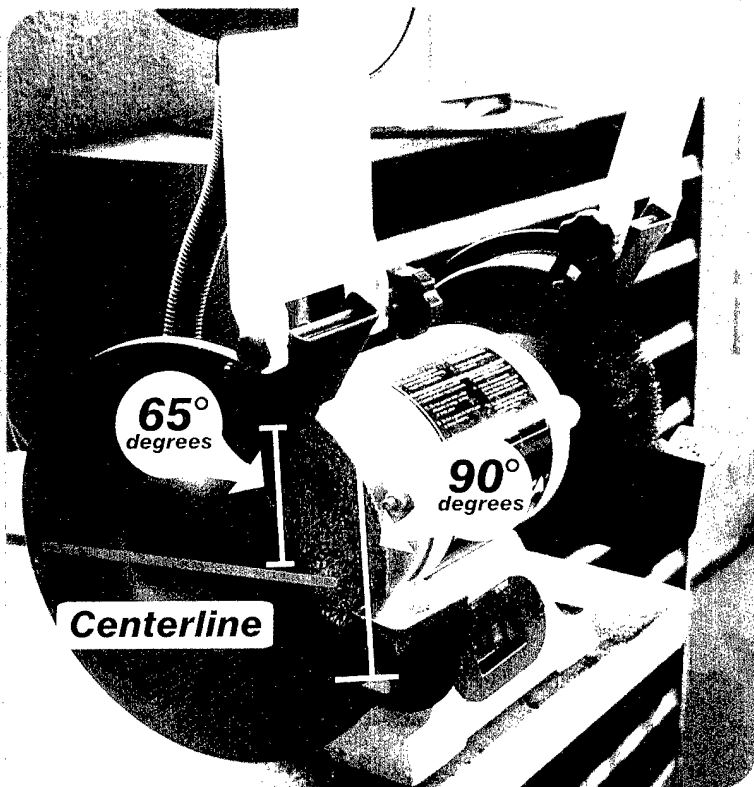
AR 385-10, Chapter 3-1 mandates that OSHA standards apply to Army workplaces.

Chapter 3-2 of the same regulation says that if there is a conflict between the OSHA standard and the Army regulation, you will use whichever standard provides the greatest measure of protection.



**No more than 1/4 inch
between wheel and
adjustable tongue
29CFR 1910.215(b)(9)**

**No more than 1/8-inch
between wheel and
work rest.
29CFR 1910.215(a)(4)**



Bench and floor stands. The angular exposure of the grinding wheel periphery and sides for safety guards used on machines known as bench and floor stands should not exceed 90 degrees or one-fourth of the periphery. This exposure shall begin at a point not more than 65 degrees above the horizontal plane of the wheel spindle.

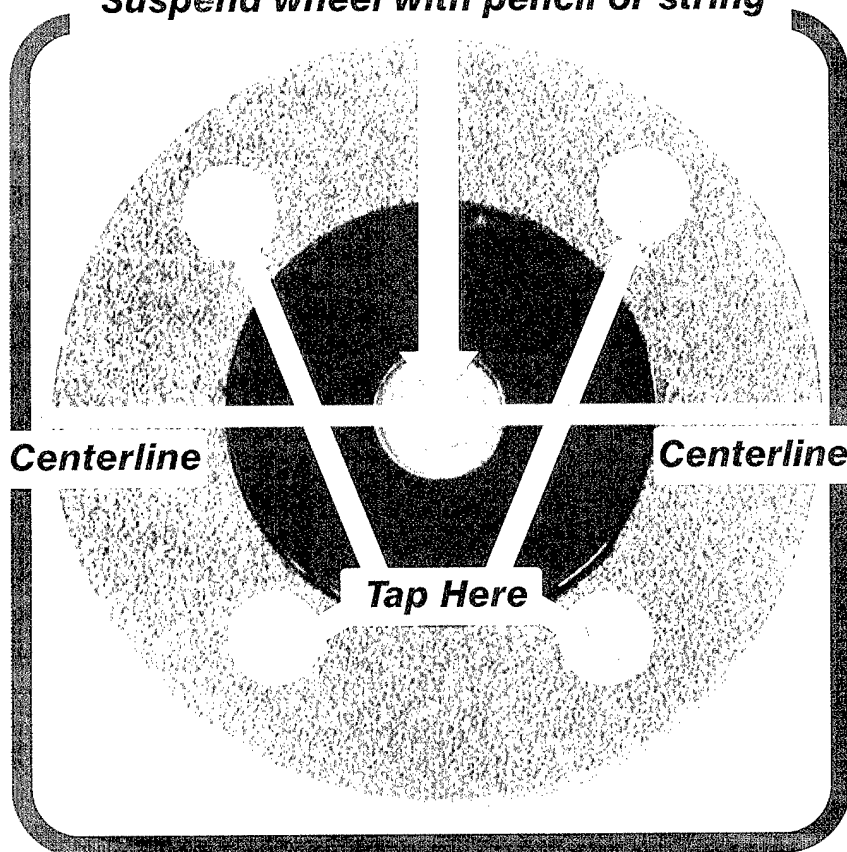
CFR 1910.215(b)(3)

GRINDER Look?

Inspection. Immediately before mounting, all wheels shall be closely inspected and sounded by the user (ring test) to make sure they have not been damaged in transit, storage or otherwise. The spindle speed of the machine shall be checked before mounting of the wheel to be certain that it does not exceed the maximum operating speed marked on the wheel. Wheels should be tapped gently with a light, nonmetallic implement, such as the handle of a screwdriver for light wheels, or a wooden mallet for heavy wheels. If they sound cracked (dead), they shall not be used.

29CFR 1910.215(d)(1)


Suspend wheel with pencil or string



These eye shields DO NOT eliminate the need for eye protection! Safety Goggles must be worn!




These guidelines should not be used as a replacement for the applicable manuals. Refer to the following standards in all cases:

- ▢ Appropriate Army manuals and regulations.
- ▢ Original Equipment Manufacturer (OEM) specifications.
- ▢ Code of Federal Regulations 29CFR 1910, General Industry.
- ▢ American National Standard Safety Code, ANSI B7.1-1970. 

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PREVENTION OF HEAT INJURIES

DURING A DEPLOYMENT TO KUWAIT



Congratulations, Task Force 1-34 Armor! Although Kuwait had one of the hottest summers ever in 2001, TF 1-34 returned from Operation Intrinsic Action without a single heat injury. This is how they did it.

In August 2001, Task Force 1-34 Armor departed Fort Riley, Kansas, to Kuwait for Operation Intrinsic Action.

We, as unit leaders, knew that not only would we operate in the fast-paced tempo of an operational mission, we would also have to contend with the physical environment of a Kuwaiti summer.

Preparing for the mission

This was a major part of our analysis as we prepared for the mission. The brutal heat could not be ignored. How would it affect our soldiers? How could we employ risk management to mitigate the risk of heat-related problems and still accomplish the mission?

Acclimatization

Acclimatization is essential in the prevention of heat injuries. Fortunately, during our pre-deployment training, we had a major heat wave in Kansas. Without a doubt, these hot and humid summers helped acclimatize us to the coming desert heat. Temperatures reached over 100 degrees with high humidity. We emphasized water intake and ensured water was available during pre-deployment training and execution. Leaders constantly enforced hydration and monitored water consumption by the number of canteens consumed.

Hydration

While in Kuwait, we emphasized the same basic tenets. NCOs ensured soldiers remained hydrated and monitored their consumption of bottled water. Ice was a critical commodity and our logistic leaders knew that it was not a mere luxury. All vehicles were issued coolers in order to cool down the issued water bottles. The intent was to cool down the water, not necessarily make the water ice-cold, which could cause stomach upset. Bottled water left in the sun was almost undrinkable; so ice cooling was imperative.

Additionally, we purchased Gatorade™ as a supplement. Gatorade™ and similar-type drinks

help add taste to the water and provide critical electrolytes. Although not mission essential, I believe these type sport drinks helped in the enforcement of water hydration because of its popularity with the soldiers.

Air movement

We identified the air movement as a critical phase in our operation and mitigated its effects. This was important because the air movement proved to be longer than anticipated, due to delays and aircraft changes. When soldiers spend time on aircraft, they become fatigued and potentially dehydrated.

To mitigate this risk, we did a number of things. First, we issued every soldier who stepped on a plane a full gallon of spring water. We coordinated beforehand with contracted air carriers and asked that they serve only water, juice or Gatorade™. No coffee or caffeinated drinks were allowed. No sodas. For the entire flight, soldiers consumed drinks that were not diuretics.

Finally, we emphasized the intake of food and enforced sleep plans. At certain times, no movies were shown and lights were dimmed to help soldiers get some rest before arrival.

Work/rest cycle


We enforced realistic work plans during the equipment draw. Due to the time of arrival into theatre, which was normally early in the morning, the decision was made by the local commander to delay Reception, Staging, Onward-movement, and Integration (RSOI) procedures. Soldiers were able to acclimatize for about 12 hours. This meant that they were allowed to rest, hydrate, and eat a meal in the dining facility before executing a rigorous RSOI.

All heavy work was accomplished at night in Camp Doha. Although temperatures were still extremely challenging, soldiers were better prepared. Plenty of iced water was available in the draw yard and NCOs enforced hydration. This decision was based on enemy threat; but in our case as a training mission, we were able to plan this important acclimatization period. If we had immediately moved to the draw yard and conducted operations in the heat of the

day, we would have inevitably risked significant heat-related injuries. In our scenario, a rest period proved the right decision, as no heat-related injuries were suffered during our entire draw process involving over 1,100 soldiers.

Once in the desert, we enforced a work plan that avoided physical activity during the heat of the day.

Maintenance, physical training, and heavy physical work were performed in the early morning or evening. August proved to be an extremely hot month; but by September, soldiers were clearly acclimatized and were able to conduct collective training 24 hours a day without any problems.

We finished our deployment in December 2001. Our force protection plan had been prepared and executed right on target. We didn't suffer a single heat-related casualty, even though Kuwait had one of the hottest summers since 1953. When we conducted our analysis of operations in the Kuwaiti summer, we decided that we could not accept casualties in this brutal environment. We looked at all techniques to mitigate the risk. We emphasized it in every operation and incorporated strict discipline into our ethos. Junior leaders enforced water hydration, the staff looked for any technique to minimize the effects of heat, and leaders planned for realistic work schedules to protect the force and maximize combat power. 

"We didn't suffer a single heat-related casualty. This was due to soldier discipline and NCO supervision."

LTC Bart Howard is Commander, 1st Battalion 34th Armor, 1st Brigade 1st Infantry Division (M), Fort Riley, Kansas. Task Force Centurion was comprised of nine companies of 1200 soldiers from Forts Riley, Hood, Carson and Sill and executed Intrinsic Action 01-03 from August to December 2001.

he following is a listing of selected safety of use messages (SOUTs) and ground precautionary messages (GPMs) issued by Army Tank-Automotive Command (TACOM) for 2QFY02.

Complete copies are available on the Army Electronic Product Support Bulletin Board via the Internet web site at <http://acps.ria.army.mil>.

TACOM SOUT-02-002, 171515ZJan02, subject: Technical, All High-Mobility Multipurpose Wheeled Vehicles (HMMWV) with Control, Remote Switch (Protective Control Box), NSN 6110-01-395-9585, received under contract DAAI07-01-C-S023. **Summary:** The PCBs received after Jul 01, under contract DAAE07-01-C-S023, manufactured by Signal and Systems, Inc., are potentially defective. This PCB (cage code 51819) may cause the starter to engage immediately when the ignition switch is placed in the run position. The starter cannot be shut down until power is disconnected. POC: Jody McInerney, DSN 786-2722, jody.mcinerney@us.army.mil.

TACOM SOUT-02-003, 011842ZMar02, subject: Operational, 25MM Double Feed Hazard. Vehicles affected: Bradley Fighting Vehicle variants; M2, NSN 2350-01-048-5920, LIN J81750; M3, NSN 2350-01-049-2695, LIN C76335; M2A2, NSN 2350-01-248-7619, LIN F40375; M2A2-ODS, NSN 2350-01-405-9886, LIN F40375; M2A3, NSN 2350-01-436-0005, LIN F60564; M3A2, NSN 2350-01-248-7620, LIN F60530; M3A2-ODS, NSN 2350-01-405-9887, LIN F60530; M3A3, NSN 2350-01-436-0007, LIN F90796, M6 Linebacker, NSN 2350-01-448-0368, LIN C00384; M7 BFIST, NSN 2350-01-432-1526, LIN F86571; USMC Light Armored Vehicle 25, NSN 2320-01-123-1602, ID 08594A, TAM E0947; and U.S. Navy MK38 MGS. Affected weapon systems include: Gun 25MM, M242, NSN 1005-01-465-3466; Gun 25MM, M242 ENH, NSN 1005-01-464-9432. **Summary:** It has been discovered that the possibility of a double feed in the M242, 25MM chain gun exists using M910 ammunition. There have been two reported cases with one involving injury to soldiers. The injuries were a result of a multiple primer/propellant initiation within the gun system. POC: Michael King, DSN 786-8668 (586-574-8668), kingm@tacom.army.mil.

TACOM GPM-02-012, 241204ZJan02, Vehicles affected: Vibratory Roller, Type II, Caterpillar, Model CS563D, LIN: S12916, NSN 3895-01-456-2735.

Summary: The manufacturer of the vibratory roller, Caterpillar, has identified a situation where the parking brake on the Type II roller may degrade and subsequently fail to hold the roller on an incline. Brake failure is a potential result of hydraulic oil leaking into the final drive group due to seal tolerances. Failure of brakes on an incline can cause vehicle movement with risk to personnel and surrounding environment. POC: Raymond J. Bayma, DSN 786-8019 (586-574-8019), baymar@tacom.army.mil.

TACOM GPM-02-013, 011606ZMar02, subject: All Terrain Cranes (ATEC), NSN 3810-01-448-2619, Model AT422T, LIN C36586. Reference: DTG251518ZApr01,

subject: TACOM GPM-01-015: "DEADLINE" NSN 3810-01-448-2619, Crane, engine cooling fan bolts loosening.

Summary: TACOM previously sent GPM-01-015 addressing the problem, and due to low response back to TACOM from the field, this updated message is being sent. TACOM received two reports of engine cooling fan bolts loosening and shearing off causing damage to the radiators and surrounding parts. Thirty-one other ATEC Cranes have had loose fan bolts without incurring damage. If fan bolts become loose, it is likely the bolts will shear off and the fan will damage the radiator, fan shroud, and surrounding coolant/hydraulic lines. POC: James E. Jump, DSN 786-6916 (810-574-6916), jumpj@tacom.army.mil.

TACOM GPM-02-015, 201745ZMar02, subject: M1A2 SEP Tanks, NSN 2350-01-328-5964, LIN T13305.

Summary: Issue 1: Air Handling Unit (AHU) Fan Motor Hydraulic Fluid Leakage. A prevailing failure mode of the AHU is fan motor hydraulic fluid leakage. Hydraulic fluid leaks are a known cause of vehicle fires. The current short-term solution is to replace the leaking fan motor in the AHU and turn in the unserviceable. This method will, by attrition, remove and replace all hardware that is likely to leak. Issue 2: Abrams crews have questioned the use of propylene glycol (PG) coolant vs. ethylene glycol (EG) in the SEP TMS. PG coolant has a much lower order of toxicity than EG making it safer for the crew, maintainer, and environment. POC: Michael Akrigg, DSN 786-2354, (586-753-2354), akrigga@tacom.army.mil.

TACOM GPM-02-016, 201817ZMar02, subject: Loaders Door Mounting Bracket on M1A1, NSN 2350-01-087-1095, LIN T13168, M1A2 and M1A2 SEP Tanks, NSN 2350-01-328-5964, LIN T13305. **Summary:** An accident occurred when the loader's hatch mounting screws on an M1A2 (SEP) pulled out of the turret block causing the hatch to release and strike the loader's head and hand. Follow-on inspections of the same production model vehicles at Fort Hood and at the Lima Army Tank Plant (LATP) found no other instances of loose hatch mounting bolts. The problem was related to the production procedures for mounting the hatch and a spot fix was implemented. Engineering analysis indicates the spot fix should solve the problem. POC: Berniece Dubay, DSN 786-8215 (586-574-8215), dubayb@tacom.army.mil.

TACOM GPM-02-017, 29 March 02, subject: Commercial 100-Round Magazine for use in M249 Squad Automatic Weapon (SAW), NSN 1005-01-127-7510, LIN M09009 (AR Role) and NSN 1005-01-451-6769, LIN M39263 (LMG ROLE). **Summary:** The C-MAG magazines were a free issue to Forts Bragg, Drum, Campbell, and Hood for use in the M249 SAW. The C-MAG magazines are an interim, alternative measure to meet our needs for training while conserving linked 5.56 ammunition. The C-MAG has not been Army type classified. The NSN is managed by DLA. During testing, rounds were sometimes left loose in the C-MAG drums. Blank ammunition showed a very high stoppage rate. POC: Don Kelly, DSN 793-1897, kellyd@ria.army.mil.



Personnel Injury

Class A

- A SSG was participating in a 2-mile run during a diagnostic PT test following a 12-hour duty when he collapsed and died.

Class B

- A SGT severed the middle finger of his left hand while attempting to adjust the height of the lawnmower during unit spring clean-up efforts. Attempted corrective surgery was unsuccessful.

- Six jumpers sustained a variety of injuries during landing on a multi-National airborne operation. Five of the jumpers were treated in an in-patient status.

Class C

- A Department of Army civilian employee sustained an extensive head injury (severed hair/scalp layers) when his hair became entangled in the tail rotor drive shaft of an aircraft.



POV

Class A

- A 1SG was operating his POV while on-duty when it collided head-on with a civilian extended cab pick-up truck. Three minors who had been riding in the bed of the truck sustained injuries, one of which was fatal. The 1SG also sustained neck and back injuries.



AMV

Class A

- A SGT sustained fatal injuries when the GMC TR/6K-gallon Water Trailer he was driving reportedly departed the road and overturned. He was pronounced dead at the scene. The co-driver sustained minor injuries.

- A civilian sustained fatal injuries when his POV was struck head-on by a military vehicle. The soldier reportedly lost control of the military vehicle when it experienced a blow-out of the left front tire and crossed the median. The passenger in the POV sustained critical injuries. The soldier has been released from the hospital.

Class B

- A soldier sustained significant internal injuries when he was pinned while walking between a parked vehicle and a moving HMMWV as it was being ground-guided into parking.



ACV

Class B (Damage)

- An M2 Bradley Fighting Vehicle slid off of the trailer bed of a HET during transport and overturned onto the road surface. Both the HET and BFV sustained damage. BFV was being transported to the NTC for unit training.



Other

Class A

- Three members of a track crew were fatally injured when an M1064 Mortar Track/120mm HE round detonated while the crew conducted misfire procedures. One crew member sustained survivable (ambulatory) injuries. (Investigation continues.)

- During a trench-clearing exercise, three soldiers sustained non-life-threatening injuries when an M-67 fragmentation grenade reportedly detonated short of its intended target. The soldier deploying the grenade sustained fatal injuries. (Investigation continues.)

- Four soldiers were killed and one seriously injured when a 107mm rocket detonated during EOD operations. (Investigation continues.)

Class B (Damage)

- An Avenger gun system sustained significant damage after it contacted the ground during a heavy equipment airborne operation.

Information based on preliminary reports of ground accidents.

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